

We claim:

1. A combination comprising:

- (A) a container, the container comprised of a first container end, a second container end and a wall extending between the first and second container ends, the container defining a chamber, the first and second container ends being closed, the container further comprising an inlet port and a discharge port;
- (B) a mixing element located in the chamber;
- (C) a driven member comprising a first member end made integral with the mixing element and a second member end located outside of the chamber, the second member end including a first coupling means;
- (D) motive force supplying means adapted to be removably located at one container end, the motive force supplying means comprising second coupling means adapted to be coupled with the first coupling means to drive said driven member and integral mixing element; and
- (E) a volume of field responsive material in the chamber.

2. The combination as claimed in claim 1 wherein the field responsive material is magnetorheological fluid.

3. The combination as claimed in claim 1 wherein the container is a drum having a volumetric capacity equal to fifty-five gallons.

4. The combination as claimed in claim 1 wherein the container is comprised of a drum having a volumetric capacity of about fifty-five gallons.

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- 5. The combination as claimed in claim 1 wherein the discharge port is located between the first and second container ends.
- 6. The combination as claimed in claim 5 wherein the discharge port is located in the container wall.
- 7. The combination as claimed in claim 1 wherein the discharge port is located at the first end.
- 8. The combination as claimed in claim 5 wherein the inlet is located at the first container end.
- 9. The combination as claimed in claim 6 wherein the inlet is located at the first end.
- 10. The combination as claimed in claim 1 wherein the mixing element is comprised of a squirrel cage.
- 11. The combination as claimed in claim 1 wherein the mixing element is comprised of a propeller mixer.
- 12. The combination as claimed in claim 1 wherein the mixing element is further comprised of an axial weld mixer.
- 13. The combination as claimed in claim 1 wherein the mixing element is further comprised of a hydrofoil mixer
- 14. The combination as claimed in claim 1 wherein the mixing element is further comprised of a vortex mixer.

15. The combination as claimed in claim 1 wherein the first end is closed by a lid, the lid being secured to the first container end by attachment means.
16. The combination as claimed in claim 14 wherein the attachment means comprises means for indicating if the lid is removed.
17. The combination as claimed in claim 1 wherein the motive force supplying means is comprised of an electric motor.
18. The combination as claimed in claim 1 wherein the first and second coupling means are comprised of torque couplings.
19. The combination as claimed in claim 1 wherein the motor is removably coupled to the container by at least two toggle clamps that engage flange means on the container.
20. The combination as claimed in claim 1 wherein the container further comprises a flow conduit flow connected to the inlet port, the flow conduit extending into the chamber, the flow conduit having a conduit discharge end located proximate the container wall.
21. The combination as claimed in claim 1 wherein the field responsive material is magnetorheological fluid.
22. The combination as claimed in claim 1 wherein the discharge port is located at the second end.
23. The combination as claimed in claim 1 wherein at least one baffle is located in the chamber.

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- 24. The combination as claimed in claim 23 wherein the at least one baffle is made integral with the container wall.
- 25. The combination as claimed in claim 23 wherein the at least one baffle is substantially perpendicular to the wall.
- 26. The combination as claimed in claim 23 wherein the at least one baffle has a rectangular shape.
- 27. The combination as claimed in claim 23 wherein the at least one baffle extends axially between the container ends.
- 28. The combination as claimed in claim 1 wherein the container is comprised of a drum having a volumetric capacity between about two hundred fifty and about six hundred gallons.
- 29. A container comprising: a first container end, a second container end and a wall extending between the first and second container ends, the container defining a chamber, the first and second container ends being closed, the container further comprising an inlet port and a discharge port; a mixing element fixedly located in the chamber; a driven member comprising a first member end made integral with the mixing element and a second member end located outside of the chamber, the second member end including a first coupling means; and a volume of field responsive material located in the chamber.

30. The container as claimed in claim 29 wherein the container comprises a motive force supplying means adapted to be removably located at one container end, the motive force supplying means comprising second coupling means adapted to be coupled with the first coupling means to drive said driven member and integral mixing element.
31. The container as claimed in claim 29 wherein the container is made integral with a base.
32. The container as claimed in claim 31 wherein the base is a palette.
33. The container as claimed in claim 29 wherein the discharge port is located on the wall near the second end, the discharge port being substantially enclosed by a shroud.

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